REMARKS

Claims 1, 3 and 5-22 are pending in the present application.

Claims 2 and 4 have been cancelled.

Claims 10-22 have been withdrawn from consideration as being drawn to nonelected subject matter.

Claims 1 and 3 have been amended to recite that monomer (A) is selected from the group consisting of monocyclohexyl fumarate and monocyclohexyl maleate. Support for this amendment can be found in the paragraph bridging pages 4-5 of the specification.

No new matter has been added by way of the above-amendment.

Interview

Applicants note with appreciation that the Examiner conducted a Telephone Interview with Applicants' representative, Garth M. Dahlen, Ph.D., Esq. (#43,575) on July 14, 2006. The Examiner was very helpful in clarifying the outstanding issues relating to the prior art based rejection.

Further details of the Interview are given below in the prior art section.

The following sections correspond to the sections of the outstanding Office Action.

Section 1. (Lack of Unity)

Applicants note that in response to Applicants' comments made in the "Lack of Unity" section beginning on page 14 of the February 3, 2006 Amendment, the Examiner has regrouped the claims to be as follows:

Group I: Claims 1-9, drawn to an acrylic rubber; and

Group II: Claims 10-22, drawn to a crosslinkable acrylic rubber composition (claims 10-16) and a shaped article (claims 17-22).

The Examiner has made the Lack of Unity finding Final. Applicants reserve the right to file claims 10-22 in a Divisional/Continuation Application.

Sections 2-11 (Issues under 35 U.S.C. 103)

Claims 1-9 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Moriyama et al. (US Pregrant Application Publication 2001/0005742) in view of Piloni et al. (US 3,196,133). Applicants respectfully traverse the rejection.

As was made clear during the July 14, 2006 Interview, the Examiner has found that the present specification provides experimental evidence of unexpected results. This is described in detail in Applicants' February 3, 2006 Amendment beginning at page 19. However, the Examiner has taken the position that the claims are not commensurate in scope with the evidence of unexpected results shown in the specification. Specifically, the claims were generically drawn to acrylic rubbers comprising a copolymer made of any butenedioic acid monoester monomer having an alicyclic structure. The Examiner noted that the acrylic rubber of Example 4 of the present specification used in the comparison comprises a copolymer made with monocyclohexyl maleate as the butenedioic acid monoester monomer having an alicyclic structure.

Accordingly, Applicants have hereinabove amended the claims to limit element (A) to be monocyclohexyl maleate or monocyclohexyl fumarate (the Examiner will note that both maleate and fumarate are the ester forms of maleic acid and fumaric acid which are both butenedioic acids). It is respectfully submitted that the skilled artisan would reasonably conclude that the unexpectedly improved scorch resistance, dry physical properties, heat resistance, permanent set, residual flash and fluidity would be found using either the maleate compound or the fumarate compound in view of the close structural similarity between the two molecules.

Accordingly, even assuming *arguendo* that the combination of Moriyama et al. and Piloni et al. make the present invention *prima facie* obvious (which it does not), the *prima facie* case would be overcome by the **unexpectedly superior properties** associated with the inventive acrylic rubber. As such, withdrawal of the rejection is respectfully requested.

Applicants now reiterate the reasons why no *prima facie* case of obviousness exists over the combination of Moriyama et al. and Piloni et al.

Moriyama et al. disclose a butenedioic acid monoalkylester-copolymerized acrylic elastomer which contains 0.1-30% by mole of butenedioic acid monoalkyl ester on the basis of carboxyl groups copolymerized in the acrylic elastomer (see claim 1 and [0081]). The butenedioic acid monoalkyl ester includes, for example, monoalkyl (such as methyl, ethyl and butyl) esters of maleic acid and fumaric acid. As the monoalkyl, only straight chain alkyl such as methyl, ethyl and butyl is mentioned (paragraph [0009]).

Moriyama et al. are silent on the copolymerization of monocyclohexyl fumarate or monocyclohexyl maleate. The Examiner relies upon the teachings of Piloni et al. to cure this deficiency. However, Applicants respectfully submit that Piloni et al. do not fairly suggest modifying the teachings of Moriyama et al. to obtain the presently claimed invention.

Piloni et al. disclose a vinyl chloride resin which is a vinyl chloride copolymer derived from (A) vinyl chloride, (B) a diester of a monoethylenically unsaturated dicarboxylic acid, (C) an alkyl acrylate or an alkyl methacrylate, and (D) a monoester of a monoethylenically unsaturated dicarboxylic acid (see column 1, last line to column 2, line 23; and claims 1 and 2 of Piloni et al.). As specific examples of the ingredient (D), many monoesters of dicarboxylic acids are mentioned, which include, for example, mono-n-butyl maleate, monobenzyl maleate and monocyclohexyl maleate (column 5, lines 20-29). In all of the working examples (i.e., Examples I through XII), only mono-n-butyl maleate is specifically disclosed. The "cyclohexyl hydrogen maleate" occurring in column 5, lines 24-25 is the sole reference to monocyclohexyl maleate in Piloni et al. Obviousness does not exist if the prior art neither indicates which of the disclosed

parameters are critical nor gives direction as to which of many choices is likely to be successful. *Merck & Co., Inc. v. Biocraft Labs., Inc.* (CAFC 1989) 874 F2d 804.

Furthermore, it is respectfully submitted again that there is no suggestion to combine Moriyama et al. with Piloni et al.

The rubbery acrylic elastomer disclosed in Moriyama et al. gives a crosslinked product having good vulcanization characteristics and good compression set characteristics, and therefore, is useful for gaskets, O-rings, packings, oil seals and various hoses (paragraph [0043]).

However, the vinyl chloride resin disclosed in Piloni et al. is not a rubbery elastomer but a resin, and attains the purpose of having good solubility in cheap hydrocarbon solvents, compatibility with alkyd resins in such solution and also in the solid coatings deposited therefrom, tight adhesion to metal and other surfaces, and a suitable degree of flexibility and elasticity to permit the flexing, bending, forming, drawing and other forming operations which it may be desired to carry out upon sheet material and other materials (see column 1, lines 44-55 of Piloni et al.).

Clearly Moriyama et al. and Piloni et al. are completely nonanalogous art. Any artisan would not be motivated to substitute the "butenedioic acid monoalkyl ester" copolymerized in the acrylic elastomer in Moriyama et al. with "monocyclohexyl maleate" as exemplified as one example of ingredient (D) to be copolymerized together with ingredients (A) (i.e., vinyl chloride), (B) and (C) for the vinyl chloride copolymer.

On this issue, MPEP 2143.01(III) states as follows:

> The mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. ... Although a prior art device 'may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.' (Emphasis in original; citations removed).

Applicants respectfully submit that should the Examiner view the references from the perspective of one skilled in the art at the time of the invention, the Examiner will conclude that Piloni et al. do not fairly suggest modifying Moriyama et al. to obtain the present invention.

It is submitted further that the instantly claimed acrylic rubber having copolymerized therein monocyclohexyl fumarate and monocyclohexyl maleate is characterized as being not scorched at a time of filling the rubber in a mold, exhibiting good releasability from the mold, and having no mold flash remaining in the mold (see page 2, penultimate paragraph of the specification of the present application).

The good releasability from the mold attained by the present invention is clearly contrary to "tight adhesion to metal and other surfaces" of the vinyl chloride resin disclosed in Piloni et al. Piloni et al. teach:

> The free carboxylic acid groups and hydrocarbon-esterified carboxylate groups so introduced into the polymeric chain providing a balance of adhesiveness on the one hand and affinity with the other monomers on the other hand[s]. (See column 5, lines 16-20).

In other words, Piloni et al. teach that monocyclohexyl maleate has a function of enhancing the adhesion of the vinyl chloride resin to metal and other surfaces.

Thus, the beneficial properties, such as good releasability from the mold of the acrylic rubber composition of the present invention cannot be expected from Piloni et al, and are surprising.

In short, the instantly claimed acrylic rubber would not be obvious from the hypothetical combination of Moriyama at al. with Piloni et al. and withdrawal of the rejection is respectfully requested.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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